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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/651,988 | 08/30/2000 | Michio Kusayanagi | FUJ 17.433 | 2401 |
| 26304 | 7590 | 02/17/2004 | EXAMINER | |
| KATTEN MUCHIN ZAVIS ROSENMAN 575 MADISON AVENUE NEW YORK, NY 10022-2585 | | | WONG, BLANCHE | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2667 | | |
| DATE MAILED: 02/17/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/651,988 | KUSAYANAGI ET AL. | |
| | Examiner | Art Unit | |
| | Blanche Wong | 2667 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) 15 is/are allowed.
- 6) Claim(s) 1-4, 13 and 14 is/are rejected.
- 7) Claim(s) 5-12 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) Interview Summary (PTO-413) Paper No(s). ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to because typographical error. In Fig. 27, AALS should be replaced and read AAL5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The title is objected to because of the following minor informalities: misspelling in the title. It is suggested that the word "Therefore" should be replaced by "Thereof." The title should read "Layer 2 Link Handler and Path Connection Method Thereof."

Appropriate correction is required.

3. The disclosure is objected to because of the following informalities: misspelling in the specification. On p.3, para. 6, ln. 4, the word "therefor" should be replaced by "therefore." The sentence should read "The present invention provides a layer 2 link handler and a path connection method therefore such that it is possible to do traffic link collection ... "

Appropriate correction is required.

4. The disclosure is objected to because of the following informalities: diagram identifications. On p.7, para. 2, 7,8,9,10, should include "(a and b)". On p.7, para. 4, a,b,c should be grouped together into "(a, b and c)". On p.7, para. 2 and 6, and on p.8,

para. 1, "the mode," "a mode" and "a mode" should be clarified because there is a first and second mode to this invention.

Appropriate correction is required.

5. The disclosure is objected to because of the following informalities: typographical error. On. p. 10, para. 2, ln. 4, the phrase "the layer 2 packet" is duplicated. It is suggested that one of "the layer 2 packet" should be removed.

Appropriate correction is required.

Claim Objections

6. Claim 15 objected to because of the following informalities: run-on phrase.

On p. 23, claim 15, ln. 9-10, it is suggested to insert a comma between device and the in the phrase "the network-side device the user-side device" and should read "... the network-side device, the user-side device ...". Also on ln. 10, it is suggested to remove the "of" before "one of" and should read "switching one of ..."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-3,13,14 rejected under 35 U.S.C. 103(a) as being unpatentable over prior arts in Fig. 26 and 27, and in view of Kim (U.S. Pat No. 6,519,256).

Regarding claim 1, Fig. 26 discloses a network-side device that is connected with a user-side device by a permanent virtual connection path, where in said user-side device is made to connect to one among multiple specified connection destinations via one of a permanent virtual connection path. Fig. 27 discloses a path specification means (PPP Trailer, PPP Header) that specifies one path of a connection request destination from layer 2 link information that is emitted from the user-side device at the time of a layer 2 link connection request; and a path connection means (CPCS-PDU Trailer, CPCS-PDU Header) that causes said permanent virtual connection path connected with the user-side device to connect to one path of the connection request destination and form a path between the user-side device and the specified connection destination. However, Fig. 26 and 27 does not disclose a layer 2 link handler nor the embodiment of Fig. 27 within a network-side device, and Fig. 26 fails to disclose multiple specified connection destinations via one of a switched virtual connection path. Kim uses SVC in an ATM network and discloses a layer 2 link handler 213,214 (second layer) in Fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in an ATM system a layer 2 link handler, as taught by Kim, for the purpose of path allocation and communication management. Col. 1, ln. 19-23.

It is noted that although Kim recites SVC connected to the user-side devices and the applicant claims SVC connected to the network-side devices, the applicant admits that SVC is better but less popular than PVC at the time of invention in the instant specification. Whether a VC is PVC or SVC, the instant claim focuses path connection, not connection type.

Regarding claims 2,3,13, Kim also discloses that said path connection includes 1) a distribution means that, by on a layer 2 packet level, distributes and transfers packets that arrive from the permanent PVC path connected with the user-side device to one path of the connection requested destination; 2) a setting means that newly sets one path of the connection request destination specified by said path specification means and connects a path between the user-side device and the specified connection destination; 3) an extracting means that . Fig. 3.

Regarding claim 14, Kim also discloses processing that specifies one path of the connection request destination from layer 2 link information in said path specification means is done under software (software is running on the server and workstation) control by a processor (there is processor inside server and workstation), and the path connection means that connects the permanent virtual connection path of the user-side device to said connection destination after on connection destination path is specified, is constituted by a switching means by means of hardware (terminal, server, workstation).

Fig. 3.

10. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over prior arts and Kim as applied to claims 1-3,13,14 above, and further in view of Mikkonen (U.S. Pat No. 6,587,457 B1).

Regarding claim 4, the combination of prior arts and Kim describes a layer 2 link handler. However, the layer 2 link handler does not show a labeling means. Mikkonen discloses a path connection means (Fig. 4B) that includes a labeling means (IPTAG) that, based on layer 2 link information emitted from the user-side device at the time of a layer 2 link connection request (Fig. 5, 504, R_Flow_Open_req), assigns a label of each layer 2 link of said connection request to a layer 2 packet from the user-side device (507-allocate resources), said path connection means further including a transfer means that transfers, by label multiplex layer 2 links (IPTAG/label is distributed at L2,5; col. 4, ln. 66-col. 5, ln.2, "... a label is added to the packets of the data link layer ..." Data link layer is layer 2.), a layer 2 packet labeled by said labeling means to the path to said specified connection destination (col. 4, ln. 66-col. 5, ln.2, "... a label is added to the packets of the data link layer in order to define which packets of the IP flow and radio flow belong to the same data flow."). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in layer 2 or data link processing a labeling means as taught by Mikkonen, in order to implement the access point in a more simple manner and to accelerate the transmission of packets. Col. 5, ln. 3-13.

Allowable Subject Matter

11. Claims 5,6,7,8,9,10,11,12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Claim 15 allowed.
13. The following is an examiner's statement of reasons for allowance: prior arts fail to disclose all limitations.

Prior arts fails to show or suggest a layer 2 path connection method comprising the steps of providing a layer 2 link handler connected by a permanent virtual connection path with the user-said device, extracting by said handler a request connection destination name from layer 2 link information emitted from a user-side device at the time of a layer 2 link connection request, extracting a connection address from said connection destination name by means of a conversion table, and notifying the user-side device connected by a permanent virtual connection path of said connection address, emitting by the user-side device the connection destination address it has been notified of to the network-side device, and based on said connection destination address connected by the network-side device the user-side device and the connection destination by switching of one of one of permanent virtual connection paths and switched virtual connection paths.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

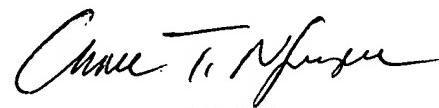
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sreedharan et al. (Pub. No. US 2002/0057700) discloses systems and methods for connecting frame relay devices via an ATM network using a frame relay proxy signaling agent. The system services an SVC connection between a first node and a second node and includes a connection controller.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 703-305-8963. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.



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